

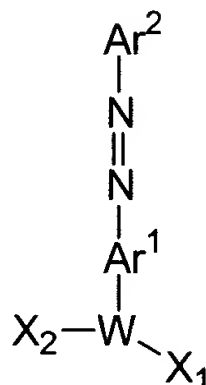
**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-26. (Canceled)

27. (Previously Presented) A compound having the formula:



wherein

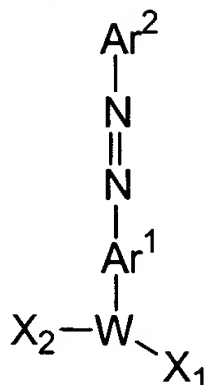
$\text{Ar}^1$  and  $\text{Ar}^2$  are each independently a substituted or unsubstituted aryl group;

$\text{X}_1$  is selected from the group consisting of OH, O-dimethoxytrityl, O-methoxytrityl, O-trityl and an oxygen atom having an acid labile blocking group;

$\text{X}_2$  is a phosphoramidite; and

W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof.

28. (Previously Presented) A compound having the formula:



wherein

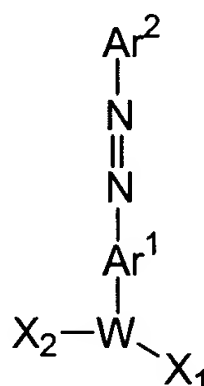
$\text{Ar}^1$  and  $\text{Ar}^2$  are each independently a substituted or unsubstituted aryl group;

$\text{X}_1$  is selected from the group consisting of H,  $(\text{C}_1\text{-C}_{12})$ alkyl, aryl, heteroaryl, and protected or unprotected functional group;

$\text{X}_2$  is selected from the group consisting of a phosphorous coupling moiety, a pentafluorophenoxy moiety and a succinimidyl moiety; and

W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof.

29. (Previously Presented) A compound having the formula:



wherein

$\text{Ar}^1$  and  $\text{Ar}^2$  are each independently a substituted or unsubstituted aryl group;

$X_1$  is selected from the group consisting of H,  $(C_1-C_{12})$ alkyl, aryl, heteroaryl, and protected or unprotected functional group;

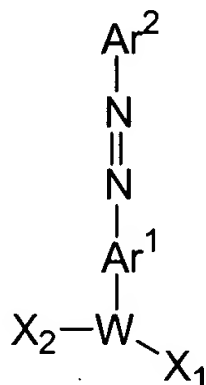
$X_2$  is a phosphoramidite; and

W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof.

30. (Canceled)

31. (Canceled)

32. (Previously Presented) A compound having the formula:



wherein

$\text{Ar}^1$  and  $\text{Ar}^2$  are each independently a substituted or unsubstituted aryl group;

$X_1$  is selected from the group consisting of H,  $(C_1-C_{12})$ alkyl, aryl, heteroaryl, and protected or unprotected functional group;

$X_2$  is a moiety reactive towards nucleophiles;

W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof; and

wherein one of  $\text{Ar}^1$  and  $\text{Ar}^2$  is directly or indirectly substituted with a substituted aryl group ( $\text{Ar}^3$ ), where  $\text{Ar}^3$  extends the resonance ability of the  $\text{Ar}^1\text{-N=N-Ar}^2$  aromatic system and thereby increases the wavelength absorbance maximum of the compound.

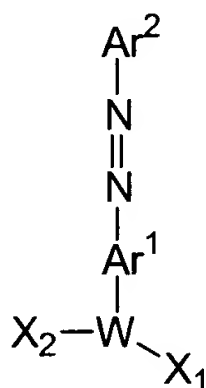
33. (Previously Presented) A compound of claim 32 wherein  $\text{Ar}^1$  is directly substituted with  $\text{Ar}^3$ .

34. (Previously Presented) A compound of claim 32 wherein  $\text{Ar}^1$  is indirectly substituted with  $\text{Ar}^3$ .

35. (Previously Presented) A compound of claim 32 wherein  $\text{Ar}^2$  is directly substituted with  $\text{Ar}^3$ .

36. (Previously Presented) A compound of claim 32 wherein  $\text{Ar}^2$  is indirectly substituted with  $\text{Ar}^3$ .

37. (Currently Amended) A compound having the formula:



wherein

$\text{Ar}^1$  and  $\text{Ar}^2$  are each independently a substituted or unsubstituted aryl group;

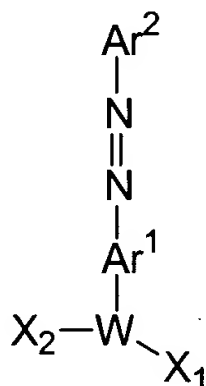
$X_1$  is selected from the group consisting of H,  $(C_1-C_{12})$ alkyl, aryl, heteroaryl, and protected or unprotected functional group;

$X_2$  is a phosphoramidite;

W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof; and

wherein  $Ar^1$  or  $Ar^2$  is indirectly substituted with an aryl group ( $Ar^3$ )  $Ar^3$  through a group selected from  $-(C\equiv C)_n-$  and  $-(CR'=CR')_n-$  where n is 0 to 5 and R' is independently selected from hydrogen,  $(C_1-C_8)$ alkyl and heteroalkyl, unsubstituted aryl and heteroaryl, (unsubstituted aryl)- $(C_1-C_4)$ alkyl, and (unsubstituted aryl)oxy- $(C_1-C_4)$ alkyl.

38. (Currently Amended) A compound having the formula:



wherein

$Ar^1$  and  $Ar^2$  are each independently a substituted or unsubstituted aryl group;

$X_1$  is selected from the group consisting of H,  $(C_1-C_{12})$ alkyl, aryl, heteroaryl, and protected or unprotected functional group;

$X_2$  is a phosphoramidite;

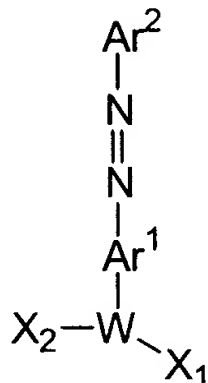
W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof; and

Ar<sup>1</sup> or Ar<sup>2</sup> is indirectly substituted with an aryl group (Ar<sup>3</sup>) Ar<sup>3</sup> through a double bond selected from carbon-carbon and nitrogen-nitrogen double bonds.

39. (Canceled)

40. (Canceled)

41. (Previously Presented) A compound having the formula:



wherein

Ar<sup>1</sup> and Ar<sup>2</sup> are each independently a substituted or unsubstituted aryl group;

X<sub>1</sub> is selected from the group consisting of H, (C<sub>1</sub>-C<sub>12</sub>)alkyl, aryl, heteroaryl, and protected or unprotected functional group;

X<sub>2</sub> is a phosphoramidite;

W is a linking group having from 3 to 100 backbone atoms selected from C, N, O, S, Si and P, said linking group being cyclic, acyclic, aromatic or a combination thereof;

wherein one of Ar<sup>1</sup> and Ar<sup>2</sup> is directly or indirectly substituted with a substituted aryl group (Ar<sup>3</sup>), where Ar<sup>3</sup> extends the resonance ability of the Ar<sup>1</sup>-N=N-Ar<sup>2</sup>

aromatic system and thereby increases the wavelength absorbance maximum of the compound; and

at least one of  $Ar^1$ ,  $Ar^2$  and  $Ar^3$  is substituted with -halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO<sub>2</sub>, -CO<sub>2</sub>R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)<sub>2</sub>R', -NR'-C(O)NR''R''', -NH-C(NH<sub>2</sub>)=NH, -NR'C(NH<sub>2</sub>)=NH, -NH-C(NH<sub>2</sub>)=NR', -S(O)R', -S(O)<sub>2</sub>R', -S(O)<sub>2</sub>NR'R'', -N<sub>3</sub>, -CH(Ph)<sub>2</sub>, perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkoxy, and perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkyl, in a number ranging from zero to the total number of open valences on the aromatic ring system; and where R', R'' and R''' are independently selected from hydrogen, (C<sub>1</sub>-C<sub>8</sub>)alkyl and heteroalkyl, unsubstituted aryl and heteroaryl, (unsubstituted aryl)-(C<sub>1</sub>-C<sub>4</sub>)alkyl, and (unsubstituted aryl)oxy-(C<sub>1</sub>-C<sub>4</sub>)alkyl.

42. (Previously Presented) A compound of claim 27 wherein W is acyclic.

43. (Previously Presented) A compound of claim 27 wherein W comprises a cyclic group.

44. (Previously Presented) A compound of claim 28 wherein W is acyclic.

45. (Previously Presented) A compound of claim 28 wherein W comprises a cyclic group.

46. (Previously Presented) A compound of claim 29 wherein W is acyclic.

47. (Previously Presented) A compound of claim 29 wherein W comprises a cyclic group.

48. (Previously Presented) A compound of claim 32 wherein W is acyclic.
49. (Previously Presented) A compound of claim 32 wherein W comprises a cyclic group.
50. (Previously Presented) A compound of claim 33 wherein W is acyclic.
51. (Previously Presented) A compound of claim 33 wherein W comprises a cyclic group.
52. (Previously Presented) A compound of claim 34 wherein W is acyclic.
53. (Previously Presented) A compound of claim 34 wherein W comprises a cyclic group.
54. (Previously Presented) A compound of claim 35 wherein W is acyclic.
55. (Previously Presented) A compound of claim 35 wherein W comprises a cyclic group.
56. (Previously Presented) A compound of claim 36 wherein W is acyclic.
57. (Previously Presented) A compound of claim 36 wherein W comprises a cyclic group.



58. (Previously Presented) A compound of claim 37 wherein W is acyclic.

59. (Previously Presented) A compound of claim 37 wherein W comprises a cyclic group.

60. (Previously Presented) A compound of claim 38 wherein W is acyclic.

61. (Previously Presented) A compound of claim 38 wherein W comprises a cyclic group.

62. (Previously Presented) A compound of claim 41 wherein W is acyclic.

63. (Previously Presented) A compound of claim 41 wherein W comprises a cyclic group.

64. (Previously Presented) A compound of claims 28, 32-36 or 48-57 wherein X<sub>2</sub> is a phosphoramidite.